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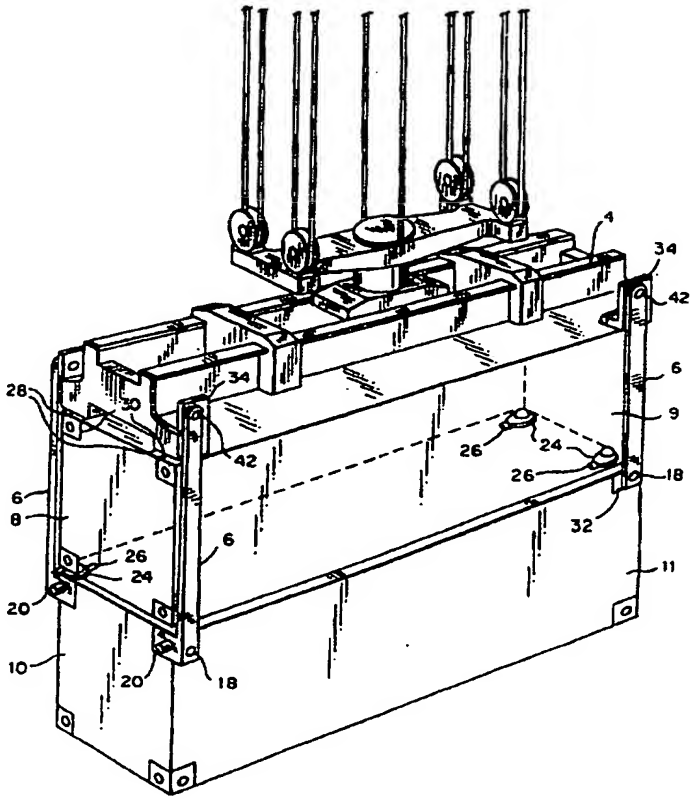
(54) Title: IMPROVED CONTAINER LIFT SPREADER FOR VERTICAL TWIN LIFT IN SYSTEM WITH LOOSE TWISTLOCKS

(57) Abstract

An improved container lift spreader system for lifting a pair of upper and lower stacked containers (8, 10) joined together by a plurality of twistlocks (24). The improved container lift spreader system having a container lift spreader (4) with connectors (28) for engaging the upper container (8) of the pair of upper and lower stacked containers (8, 10) and a plurality of arms (6) for engaging the lower containers (10) of the pair of upper and lower stacked containers (8, 10).



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IMPROVED CONTAINER LIFT SPREADER FOR VERTICAL TWIN LIFT IN SYSTEM WITH LOOSE TWISTLOCKS

CROSS REFERENCE TO RELATED APPLICATION

This application is a continuation of U.S. application no. 08/714,562, filed September 16, 1996, now pending, which claims the benefit of U.S. provisional application no. 60/024,052, filed August 16, 1996, the entire contents of which are hereby incorporated herein by reference.

BACKGROUND OF THE INVENTION

Field of the Invention

The present invention relates to a system to lift two vertically stacked ISO freight containers with a conventional spreader outfitted with four lift arms secured to the bottom container in the top corner fittings. In between the two containers are four twistlocks with positive locking and suitable strength to lift the bottom container. Normally, only the top container is lifted by the spreader in a conventional manner by four lift twistlocks operated by remote control by the crane operator. In the invention, when the four lift twistlocks are engaged to the top container, the second container is further attached to the top container through the four loose twistlocks and both containers are lifted together by the four remotely controlled arms by the crane operator.

Prior Art

Freight containers according to the ISO specifications have been used worldwide since the early 1960's. The container is 8' wide and 20', 40' or 45' long and come in different heights, usually 8', 8½' and 9½'. When loading and unloading the containers on and off container ships, different types of lifting gear are used. The most common is the remotely operated lift spreader that can extend from 20' to 40' and 45' in length. All such spreaders also use remotely operated twistlocks that fit into the upper corner fittings of a single container and are locked into the corner by twisting the head on the twistlock. Once the crane operator has twisted

the locks, the spreader can be hoisted with the one container now hanging in the twistlocks under the spreader.

The container ships are basically of two type: with or without hatch covers. The ships with hatch covers at deck level stack the containers below deck in vertical guides, so called cell guides. The ships without hatch covers usually have cell guides from the bottom up to 4 - 5 tiers of containers above deck level. These guides cover only about 6 inches at each corner in both length and width direction. The guides project only about ½ inch more than the width of the container and about 1 inch longer than the length of the container. The containers are usually designed to be stacked up to 9 high.

Above the deck the containers are stacked on the hatch covers over the full width of the ship. The clearance between the container stacks in transversal direction is usually only 2 - 4 inches. In longitudinal direction the container stacks are divided up into bays, either 20', 40' or 45' long. In between each bay there are walkways for the stevedores to attach lashing gear to tie down the containers to the deck or hatch covers. In between adjacent containers in a tier there are four twistlocks. The twistlocks are designed to withstand both compression, shear and lift forces on the locks during the sea voyage.

With the constant development of the container shipping industry has come larger and more expensive ships. More and more emphasis has been put on trying to reduce sea time as well as port time. More automated and faster ships reduce crew size and sea time and thereby costs. The handling times in the ports have also been steadily improved with faster cranes and better lashing equipment, such as semi-automatic twistlocks. However, the containers are still only handled one at a time, so even with the best equipment the productivity seldom goes over 40 moves per hour. In some ports it could be as low as 20 moves per crane and hour even with the best equipment.

OBJECT AND SUMMARY OF THE INVENTION

The object of the claimed invention is to dramatically improve the port productivity of loading and unloading freight containers without compromising safety for the stevedores or the cargo. This is primarily achieved by outfitting the lift spreader with four lift arms so that two vertically stacked containers with four twistlocks between them can be lifted at the same time. The upper container is lifted by the conventional spreader twistlocks while the lower container is lifted by the upper container through the four loose twistlocks fitted in between the two containers and the four lifting arms that the crane operator folds down and secures prior to lifting the two containers from the dock to the ship or from the ship to the dock.

At present, the containers presently are stacked in the cell guide system without any twistlocks between the containers. However, with the claimed invention, twistlocks must be used between those containers that are loaded into the holds in vertical pairs. The design of the twistlock must be such that it can be turned with an opening handle under the container so that no parts of the of the twistlock are protruding outside the 8' wide and 20'. 40' or 45' long container that would prevent or obstruct the twin stack of containers from being lowered or raised from into the cell guide.

Before lowering the two containers down into the cell guide the spreader arms must be folded away and stored within the outer periphery of the spreader. Once the two containers have been stacked on top of the stack in the cell, the crane operator will release the spreader by twisting the fixed twistlocks on the spreader. If the containers are to be stacked on the deck, the arms can, if necessary, be folded away before placing the two containers in their position depending on space conditions.

When unloading containers locked together two and two from the cell guide system below deck, the arms cannot be attached to the lower container until the two containers have been lifted up to the top of the cell guide to expose the top castings on the lower container. When unloading from the deck,

the two containers must be lifted with the conventional spreader twistlocks and the four loose twistlocks until the two containers can be moved slightly sideways to provide enough space around the containers to allow the four lift arms to be secured to the top castings on the lower container. This is necessary because there is normally not enough space sideways between stacks to permit the inner set of lift arms to fit between adjacent stacks of containers.

Due to the space restrictions in both the cell guides and at least on one side of a container stack on deck, the four loose twistlocks work as the primary means of lifting the lower container below the cell guides and for the initial or final movement on deck. Even though the twistlocks used are strong enough, the purpose of the four lifting arms on the spreader is to secure the weight of the bottom container directly to the spreader during the majority of the lifting sequence, including at least the entire time that the bottom container presents a hazard to people working on the ship and the dock around the crane.

The four arms are hydraulically operated by the crane operator. They are attached to a point above the spreader twistlocks. From the parked position within the outer periphery of the spreader, each arm is folded out on a hinged L-shaped member from the side of the spreader frame in a horizontal position, then rotated to a substantially vertical position around a pivot point so that the end of the arm drops down to be substantially perpendicular with the horizontal spreader frame. The length of the arm is then adjustable to reach the corresponding top corner casting of the top container. The lower end of the arm is attached and secured to the top casting on the bottom container by means of one fixed lift pin and one hydraulically operated lift and locking pin per arm, each positioned on an angled pin bracket. The lift and locking pin can be hydraulically extended and turned to maintain the angled pin bracket in close engagement to its corresponding corner casting. Each pin enters through a corresponding corner casting aperture, one from the side of the container and the other from the end of the container, making

it impossible for the arm to slip out of the corner casting. This perpendicular lift pin arrangement also eliminates the need to arrange a constant arm pressure towards the container corners to safeguard the pin grip. The fixed pin is inserted into the side aperture of the corner casting. Once the fixed lift pin is located and has centered the angled pin bracket around the corner of the corner casting, the lift and locking pin is hydraulically extended into position. The shape of this pin is eccentric to assure that the pin will pull the angled bracket tight against the corner casting once the pin has been inserted in the corner aperture and then rotated. Both pins and the angle pin bracket are then tight against two sides of the aperture walls of the corner casting that are perpendicularly located to each other.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a perspective view of a conventional gantry crane and lift spreader with lift arms according to the invention;

Fig. 2 is a perspective view as shown in Fig. 1 with the lift arms according to the invention folded down, in engagement with the lower of a pair of containers.

Fig. 3 is a perspective view of a conventional gantry crane and lift spreader with the lift arms according to the invention folded up;

Fig. 4 is a perspective view as shown in Fig. 3 after the lift spreader has lifted a pair of containers out of or into a guide cell;

Fig. 5 is a perspective view of the lift arms according to the invention after they have been folded down to engage the lower of the pair of containers of Fig. 4.

Fig. 6 is a top view of half of the lift spreader and the lift arms according to the invention extend to 45 feet.

Fig. 7 is an end view of the lift spreader and one of the lift arms shown in Fig. 6.

Fig. 8 is a side view of the lift spreader and lift arms shown in Fig. 6.

Fig. 9 is a side view of the lift spreader and lift arms according to the invention in folded up and folded down positions,

Fig. 10 is an end view of the lift spreader and lift arms according to the invention in two folded down positions,

Fig. 11 is an elevation view of the lift arm according to the invention in combination with an L-shaped link member to rotate a lift arm according to the invention,

Fig. 12 is an elevational section view of the threaded lift rod of a lift arm according to the invention.

Figs. 13 and 14 are sectional views of the a arm according the invention in different positions relative to the lower container.

Figs. 15 and 16 are elevation views of a lift arm according to the invention in the positions shown in Figs. 13 and 14.

Fig. 17 is an exploded view of the lift and locking pin of the lift arm according to the invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT(S) OF THE INVENTION

Fig. 1 shows a conventional gantry crane 2 and lift spreader 4 modified with four lift arms 6 according to the invention, the lift arms being better shown in partial enlargement A. The modified spreader is loading a pair of upper and lower containers 8, 10 from a load carrier 12 into the cell guides 14 of a conventional container ship 16 in the direction of arrows X,Y,Z.

Fig. 2 shows the lift arms 6 in their folded down position with fixed lift pins 18 and lift and locking pins 20 engaged in top corner castings 32 on lower container 10. In Fig. 1, the conventional lift spreader 4 is extended to engage 40' containers 8, 10 but can also be further extended to engage 45' containers or retracted to engage 20' containers. Since the spreader structure to accomplish adjustment for different length containers is conventional, it will not be further described herein. Also shown schematically are twistlocks 24 with positive locking, positioned to engage upper container 8

and lower container 10 together as a single unit. The elements of Figs. 1 and 2 will be described in greater detail below.

Fig. 3 shows the lift spreader 4, after it has lowered upper and lower containers 8, 10 as a unit completely into a cell guide 14 in the direction of arrow C. Containers 8, 10 are engaged together by twistlocks 24 as discussed above when they are moved up or down in a cell guide 14. Twistlocks 24 are manually opened by a handle 26 positioned under bottom 28 of the upper container 8 to preclude interference between the cell guide 14 and the container unit 8, 10 during loading or unloading. As shown in Fig. 3, lift arms 6 are folded up and into a horizontal position parallel to the axis of lift spreader 4 until or before upper container 8 is raised or lowered by the spreader operator from, or into cell guide 14. Raising or lowering the containers 8, 10 is made possible by both twistlocks 24 engaged between containers 8, 10 and conventional twistlocks 28 (see Figs. 7 and 10) on the spreader lifter 4 being engaged to the top corner casting 30 on upper container 8.

Fig. 4 shows spreader lifter 4 after it has lifted containers 8, 10 as a unit partially out of cell guide 14 in the direction of arrow D. Lifting of the unit is stopped by the spreader operator when the upper corner castings 32 of the lower container 10 clear the top 34 of cell guide 14. In this position lift arms 6 can be moved along curved arrows E from their horizontal position to their folded down position so that fixed lift pins 18 and lift and locking pins 20 can be engaged to the top corner castings 32 of the lower container 10.

Fig. 5 shows the lift arms 6 after being rotated down from their folded-up position into a position where pins 18, 20 are engaged to top corner castings 32 of lower container 10.

Fig. 6 is a top view of half of the lift spreader 4 extended to 45'. The lift arms 6 are shown folded in their first horizontal or parked position on pivot pin 42 as further discussed below.

Fig. 7 is an end view of the spreader lifter 4 of Fig. 6. The left side of Fig. 7 shows only an L-shaped link member 34 which can be rotated on one of its edges around hinge

36 from position F to position G. L-shaped member link 34 can be rotated through a range between 0° to 90° by extension of piston 38 of hydraulic cylinder 40 operated by the hydraulic pump of spreader 4 (not shown). The right side of Fig. 7 shows a lift arm 6 which can be rotatably driven on L-shaped member 34 around pivot pin 42 by a hydraulic motor 44. Arm 6, thus can be moved from a first horizontal position within the outer periphery of the spreader 4 when link member 34 is in position F to a second horizontal position outside the outer periphery of spreader 4 when link member 34 is rotated to position G. In position, G, (where link member 34 has been rotated approximately 87° of the 90° range) arm 6 is able to be further rotated to a folded down position spaced from corner casting 32, as better seen on the right side of Fig. 10). The rotation of arm 6 after L-shaped member 34 is rotated to position G will be described in greater detail along with Fig. 11 below.

Fig. 8 is a side view of the lift spreader 4 of Fig. 6 with the lift arms 6 remaining in the first horizontal or parked position. The lift arms 6 can be maintained in this position even when the spreader 4 is retracted for use with a 20' container.

Fig. 9 is a side view of half the lift spreader 4 extended to 45' with a lift arm 6 first shown in solid lines folded out around hinge 36 into a second horizontal position parallel to the axis of spreader 4. Arm 6 is then shown in dashed lines rotated by hydraulic motor 44 (Fig. 7) around pin 42 into a first folded down position spaced from corner casting 32 where fixed lift pin 18 and locking and lift pin 20 can be engaged to the corner casting 32 as shown in Figs. 2 and 5, further described below.

Fig. 10 is an end view of the lift spreader 4 upper container 8 and the top portion of lower container 10. On the right of Fig. 10, lift arm 6 is shown in the first folded down position of dashed-lined arm 6 in Fig. 9 where pins 18, 20 are spaced apart from corner casting 32 of lower container 10. As previously discussed, the lift arm 6 is moved to this position by extension of piston 38 of hydraulic cylinder 40 so that L-

shaped link member 34 is rotated slightly less than 90°, for example, 87°, from initial position F shown in Fig. 7 where the piston 38 is retracted, to position G where the piston 38 is extended. It is necessary to rotate L-shaped link member 34 less than 90° to permit rotation of lift arm 6 from its horizontal position to the first folded down position shown in Fig. 9, where arm 6 is not yet engaged to corner casting 32. This position of the L-shaped link member 34 permits the rotation of lift arm 6 to the first folded down position shown in Fig. 9 to occur without striking the sides 9, 11 of containers 8, 10. After such rotation and positioning, piston 38 of cylinder 40 is further extended to move lift arm 6 and angled pin bracket 46 into a second folded down position in engagement with corner casting 32 as shown on the left side of Fig. 10. In the second folded down position, link member 34 has been rotated its full range of 90°. This is further described below along with Figs. 12, 13 and 14.

Fig. 11 better shows how lift arm 6 is rotatably driven on L-shaped link member 34 around pivot pin 42 by hydraulic motor 44 after L-shaped member 34 has been rotated from position F, (0°) to position G, (87°) by piston 38 as depicted in Fig. 7. Fig. 11 shows hydraulic motor 44 having a drive shaft 48 with a drive cog wheel 50 on the free end of shaft 48. Also shown is pivot pin 42, which is formed with a threaded circular projection 52, a square projection 54, a circular projection 56 and a circular head 58. The circular head 58 further has a semi-circular cog drive wheel 60 on the circumference of head 58, which is in driven engagement with drive cog wheel 50. Arm 6 is fixed on square projection 54 against circular projection 56 by nut 62 which is tightened by corresponding threads on threaded circular projection 52 after circular projection 56 has been inserted through corresponding circular through hole 64 of L-shaped link member 34. This assembly of elements permits hydraulic motor 44 to drive pivot pin 42 with arm 6 fixed thereon to rotate arm 6 from the horizontal solid line-position to the first folded down dash line position shown in Fig. 9.

Fig. 12 is a partial longitudinal sectional view of arm 6 showing threaded lift rod 69 rotatably engaged between lower arm 6a and upper arm 6b so that arm 6 can be adjusted to permit pins 18, 20 at the end of arm 6 to be better aligned with in apertures 66, 68 of corner castings 32. To achieve such adjustment the operator of the crane actuates hydraulic motor to rotate threaded lift rod 69 in positioning bushings 71, 72 on upper arm 6b and in rod bearing 73 on lower arm 6a. Rotation of threaded lift rod 69 draws corresponding threaded hole 74 on lower arm 6a either up or down at the election of the operator on lift rod 6 along with lower arm 6a so that pins 18, 20 can be aligned and positioned to allow their engagement in apertures 66, 68 of corner castings 32. After such alignment, engagement of pins 18, 20 in apertures 66, 68 is achieved by further rotation of link member 34 (90°) to the second folded down position of arm 6 and adjustment of lift and locking pins 20 as further explained below.

Figs. 13 and 14 respectively show a sectional view of the movement of angular pin bracket 46 on arm 6 from the first folded down position of arm 6 on the right side of Fig. 10 where pins 18, 20 are not engaged to corner casting 32 to the second folded down position of arm 6 on the left side of Fig. 10 where pins 18, 20 are shown engaged in apertures 66, 68 of corner casting 32.

Figs. 15 and 16 respectively show an elevation view of the same movement of angular pin bracket 46 on arm 6 as Figs. 13 and 14 wherein piston 76 of hydraulic cylinder 77 is shown extended from the position of Fig. 15 to the position of Fig. 16. Extension of piston 76 results from actuation of hydraulic cylinder 77 when pins 18, 20 are ready to be engaged in apertures 66, 68. In the movement of arm 6, shown in that of Fig. 16, lift pin 18, which is fixed to angular pin bracket 46, is inserted directly into aperture 66 of corner casting 32. During the same operation, lift and locking pin 20 is slidably rotated on pin bracket 46 into aperture 68 by the extension of piston 76 so that the eccentric portion 78 of pin 20 is drawn into close abutment with an edge of aperture 68 while locking

cam 80 is drawn into abutment and locking position with an inner wall 82 of corner casting 32.

Fig. 17 is an exploded view of lift and locking pin 20 and the end of piston 76 which better show the elements that result in pin 20 being slidably rotated on pin bracket 46 and locked in aperture 68 of corner casting 32. As shown, U-shaped end 82 of piston 76 is to be rotatably fixed by hinge pin 83 to lever arm 84 which in turn is to be rotatably fixed to pin 20 by hinge pin 86. When assembled as shown in Figs. 15 and 16 the sliding and rotation of pin 20 by extension of piston 76 and the rotation of lever arm 84 around hinge pins 83, 86 in aperture 68 is guided by guide track 87 and projection pin 88 fixed on angular corner bracket 46.

The foregoing description of the specific embodiments will so fully reveal the general nature of the invention that others can, by applying current knowledge, readily modify and/or adapt for various application such specific embodiments with out departing from the generic concept, and therefore such adaptations and modifications are intended to be comprehended within the meaning and range of equivalents of the disclosed embodiments. It is to be understood that the phraseology or terminology herein is for the purpose of description and not of limitation.

All references cited in this specification are hereby incorporated by reference.

WHAT IS CLAIMED:

1. An improved container lift spreader system for lifting a pair of upper and lower stacked containers, said improved container lift spreader system comprising,

a container lift spreader,

said container lift spreader having connection means for engaging an upper container of said pair of upper and lower stacked containers and a plurality of arm means for engaging a lower container of said pair of upper and lower stacked containers, and

a plurality of loose twistlocks adapted to be engaged between said pair of upper and lower stacked containers.

2. The improved container lift spreader system according to claim 1 wherein

a first end of each of said plurality of arm means is rotatably mounted on said container lift spreader, and

a second end of each of said plurality of arm means is respectively adapted to be engaged to a corner casting on said lower container.

3. The improved container lift spreader system according to claim 2, wherein

said first end of each of said plurality of arm means is respectively mounted on link means which rotate said arm means from a first position within an outer periphery of said container lift spreader to a second position outside said outer periphery.

4. The improved container lift spreader system according to claim 3, wherein each of said plurality of arm means can be rotated when in said second position outside said outer periphery into a first folded down position spaced from said corner casting.

5. The improved container lift spreader system according to claim 4, wherein each of said plurality of arm means has extension means for extending and contracting said

second end when said arm means is in said first folded down position to align said second end with said corner casting.

6. The improved container lift spreader system according to claim 4, wherein each of said plurality of arms means is adapted to be rotated to a second folded down position to engage said second end with said corner casting on said lower container.

7. The improved container lift spreader system according to claim 2, wherein each of said plurality of arms means has a fixed pin and a slidable rotatable pin on a pin bracket at said second end,

said fixed pin adapted to be inserted into a first aperture on said corner casting,

said slidable rotatable pin adapted to be inserted into a second aperture on said corner casting after said fixed pin has been inserted into said first aperture,

said slidable rotatable pin having an eccentric portion, and a locking cam, and

insertion means for sliding and rotating said slidable rotatable pin in said second aperture of said apertures while drawing both said eccentric portion against an edge of said aperture and said locking cam against an inner wall of said corner casting.

8. A method of lifting a pair of upper and lower stacked containers from a cargo carrier comprising the steps of:

securing a plurality of loose twistlocks between said pair of upper and lower stacked containers,

engaging a plurality of connection means on a container lift spreader to an upper container of said pair of upper and lower stacked containers and engaging a plurality of arms on the container lift spreader to a lower container of said pair of upper and lower stacked containers.

9. The method according to claim 8 wherein the step of engaging the plurality of arms on the container lift spreader to the lower container includes the steps of

rotating a link on which a first end of each of said plurality of arms is rotatably engaged from a first position within an outer periphery of said container lift spreader where each of said plurality of arms is parallel to an axis of said container lift spreader, to a second position outside said outer periphery where each of said pair of arms remains parallel to said axis so that each of said plurality of arms can thereafter be rotated from said second position to being engaged to said lower container.

10. The method according to claim 8, wherein a second end of each of said plurality of arms has a fixed pin and a slidable rotatable pin,

said fixed pin being inserted into a first aperture on a corner casting of said lower container when said arm engages said lower container,

said slidable rotatable pin being slid and rotated into a second aperture on said corner casting after said fixed pin is inserted in said first aperture,

said slidable rotatable pin having an eccentric portion, and a locking cam, and

insertion means for sliding and rotating said slidable rotatable pin in said second aperture while drawing both said eccentric portion against an edge of said second aperture and said locking cam against an inner wall of said corner casting.

FIG. 1

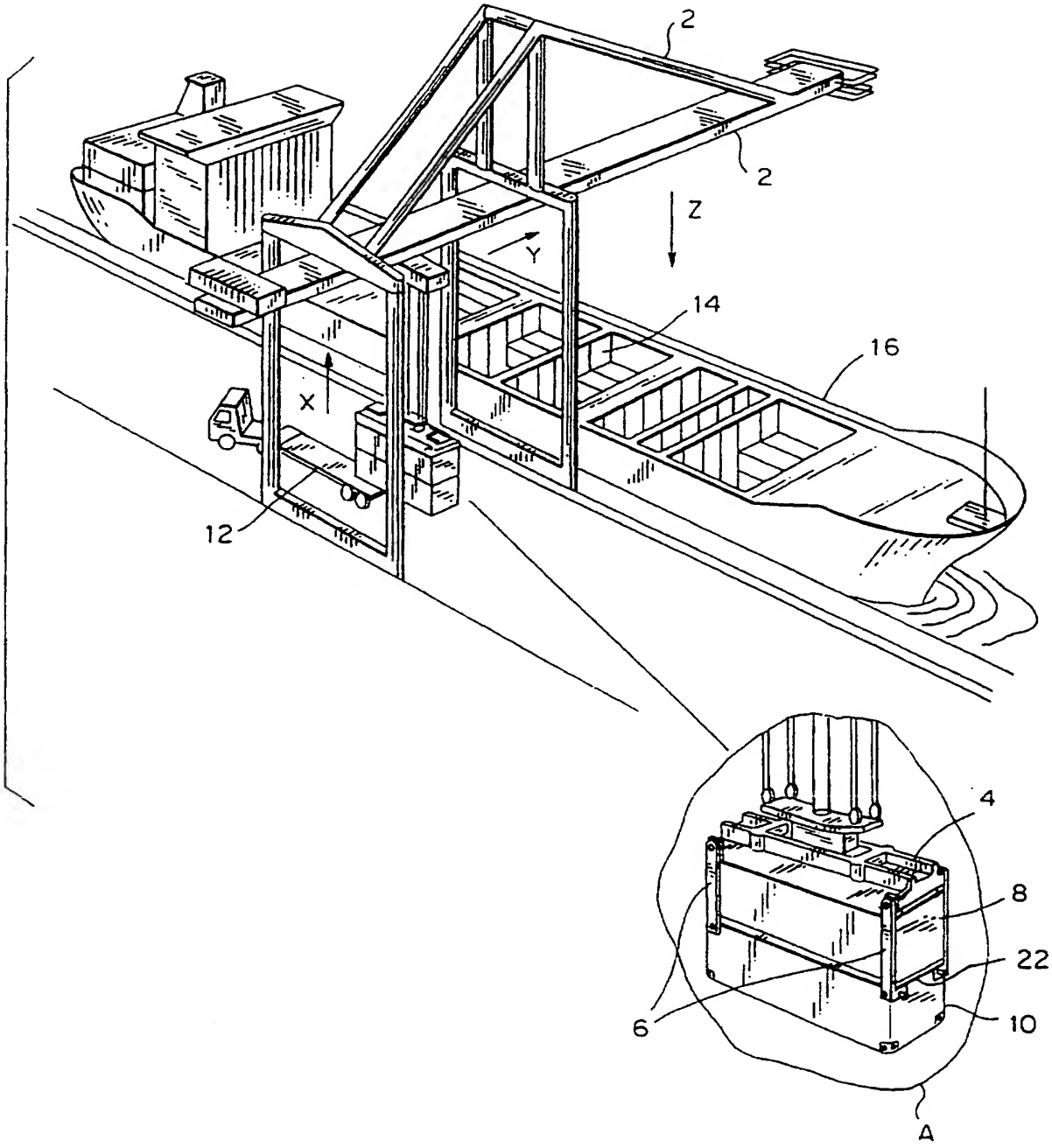


FIG. 2

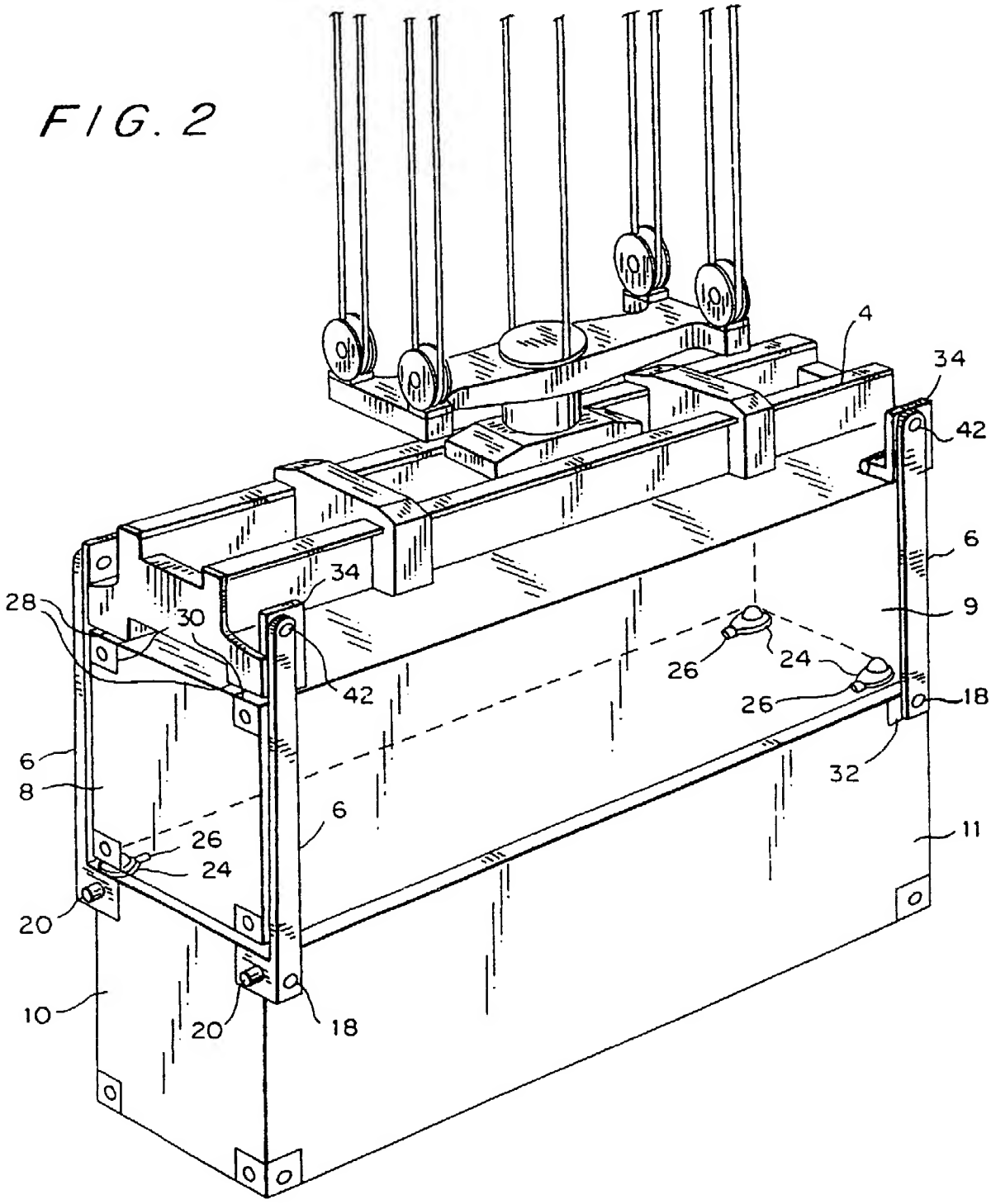


FIG. 3

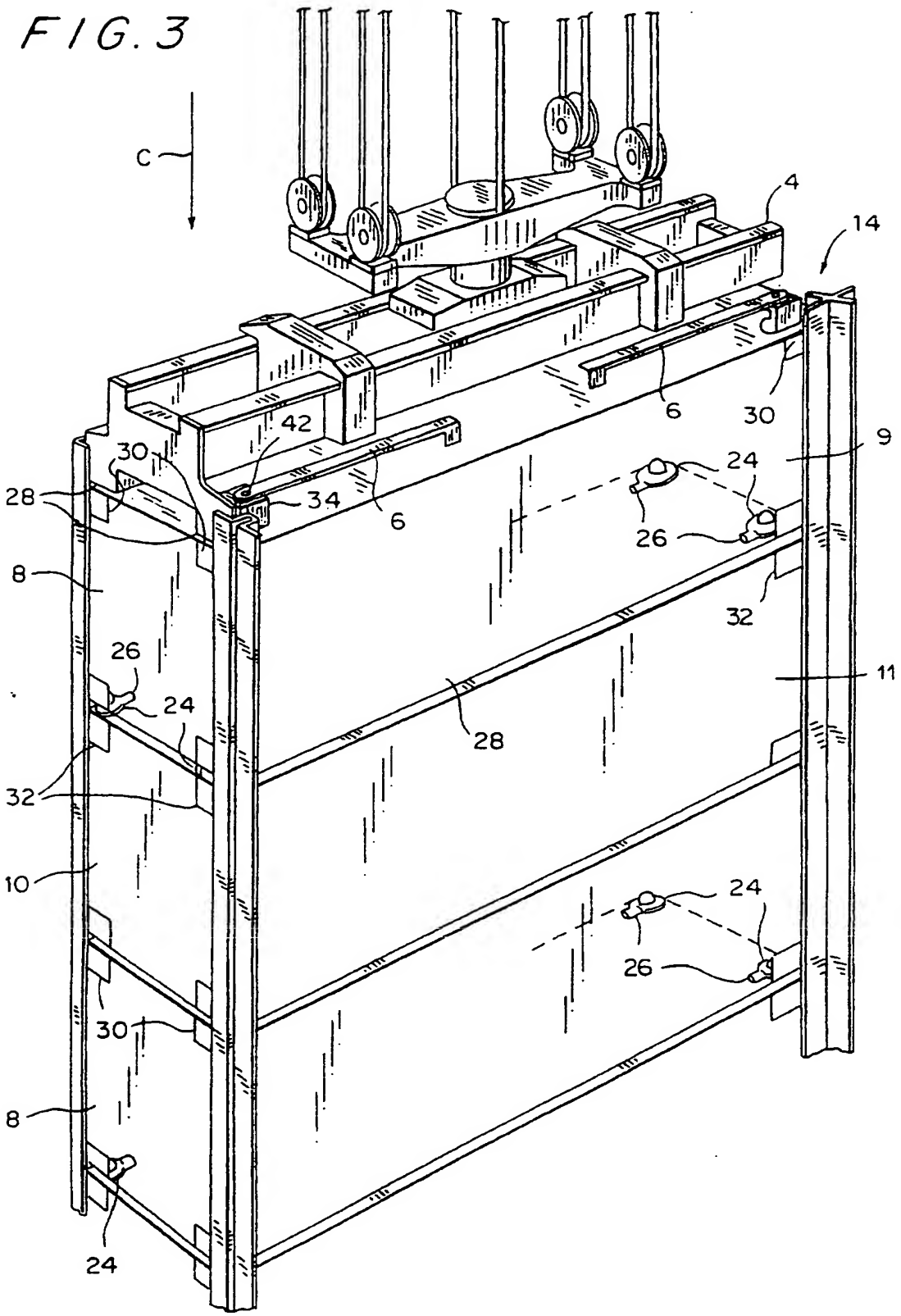


FIG. 4

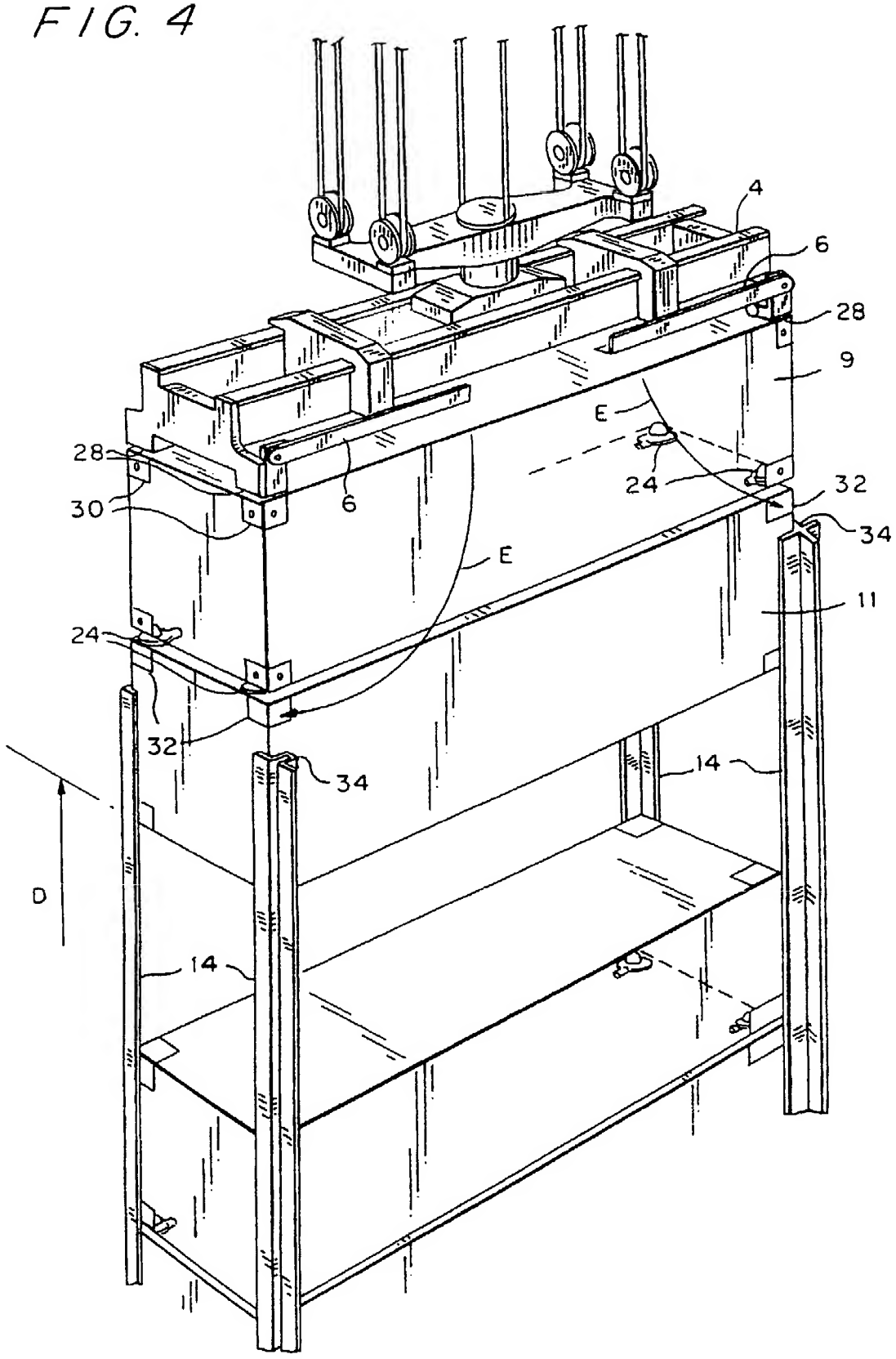


FIG. 5

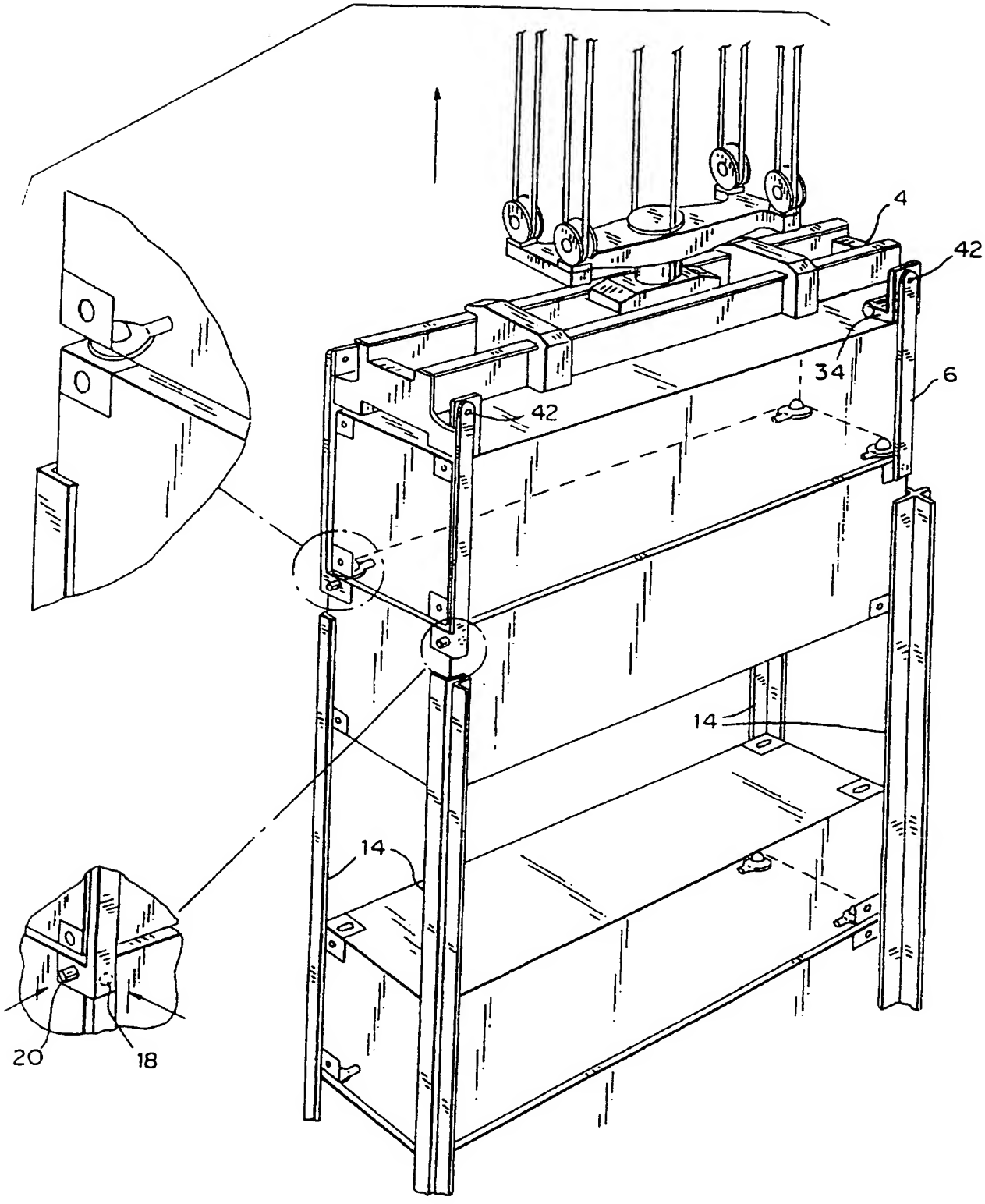
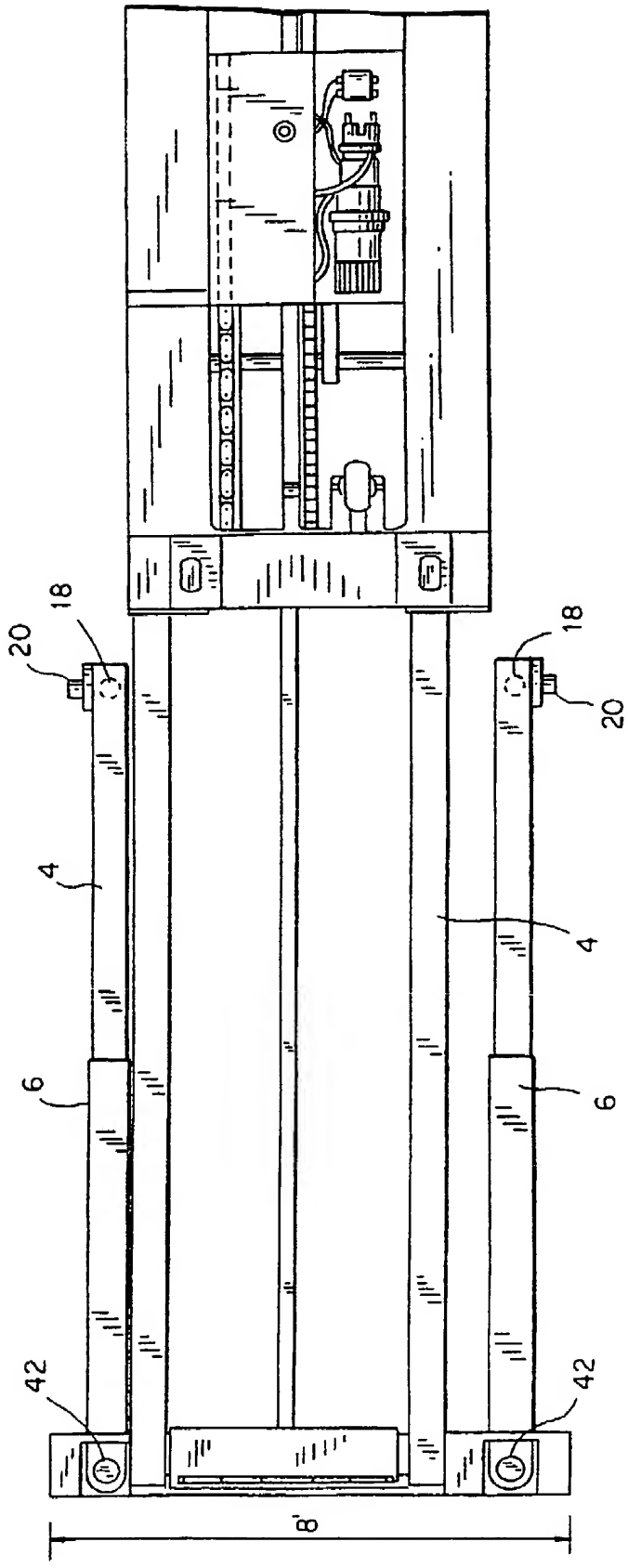


FIG. 6



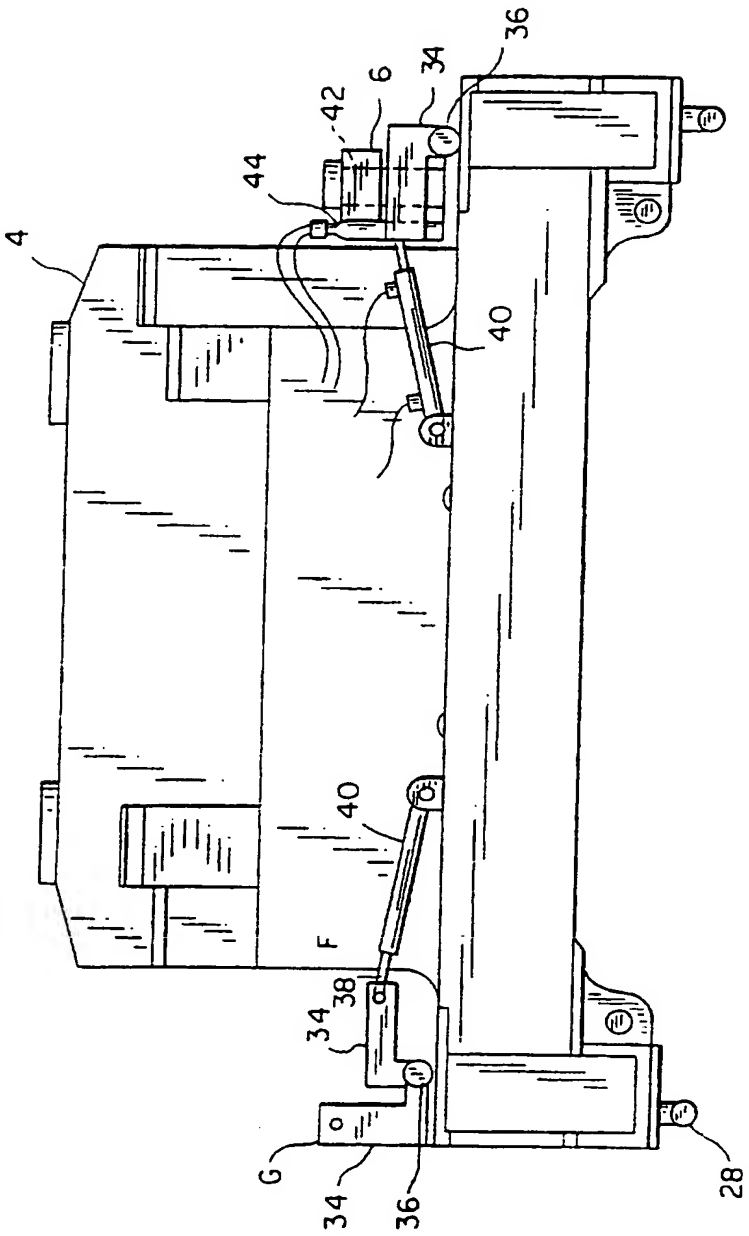


FIG. 7

FIG.8

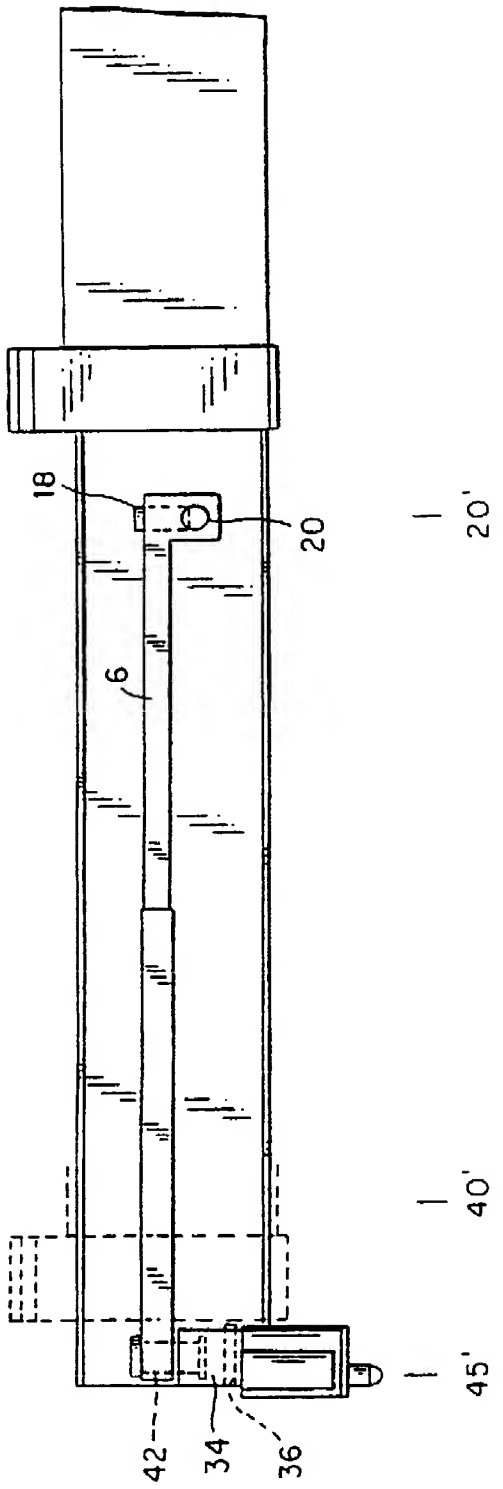


FIG. 9

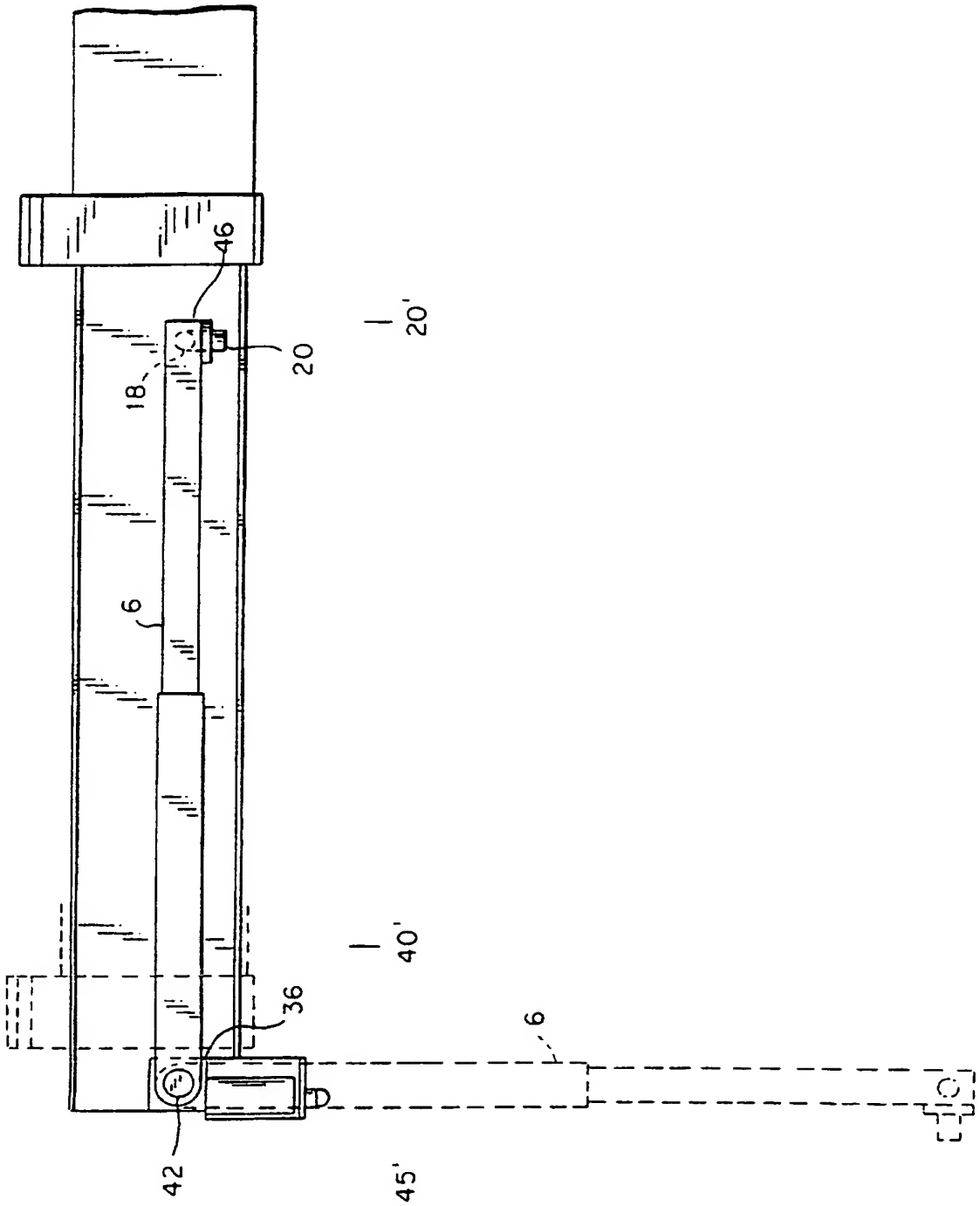


FIG. 10

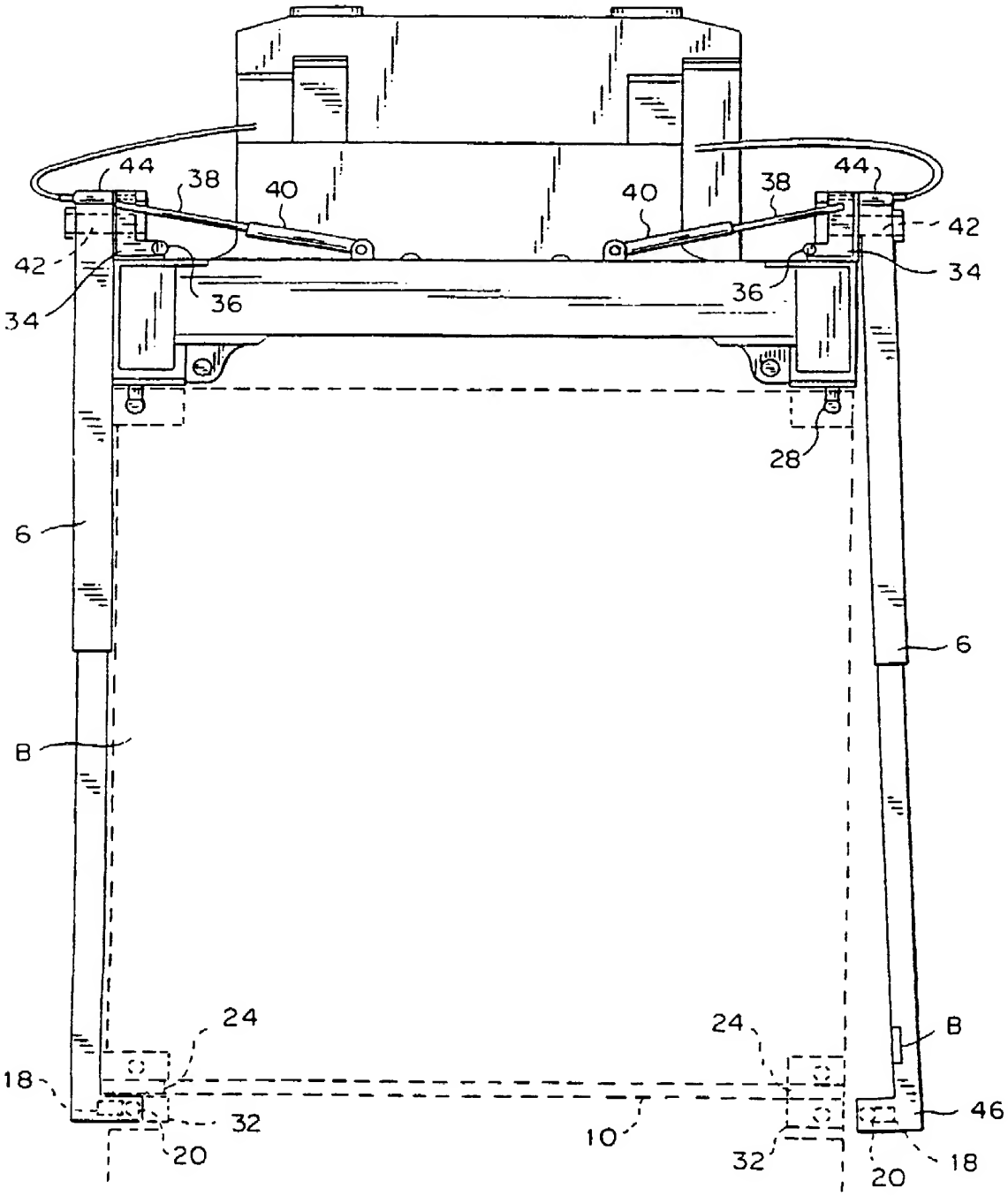

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FIG. 11

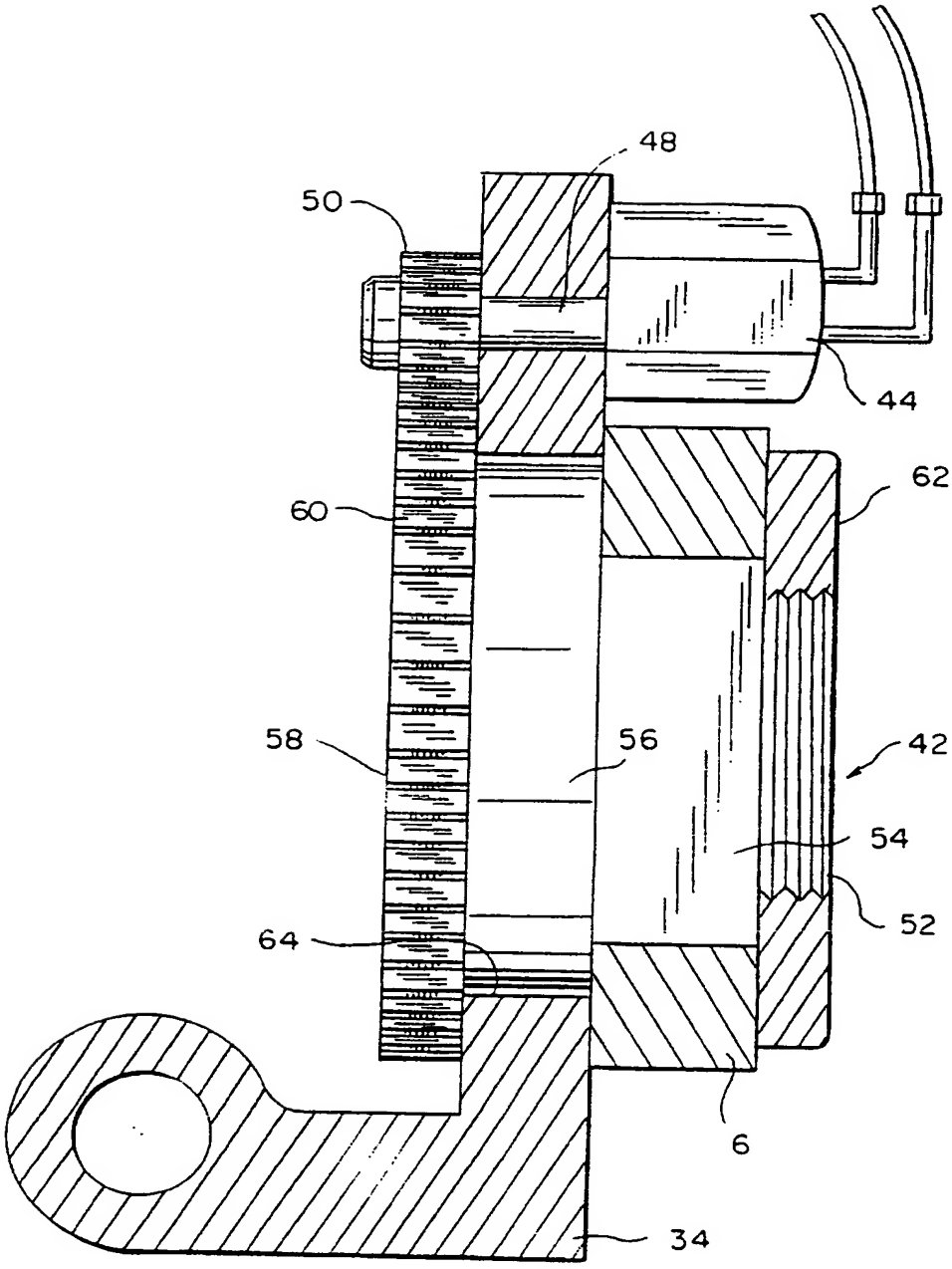


FIG. 12

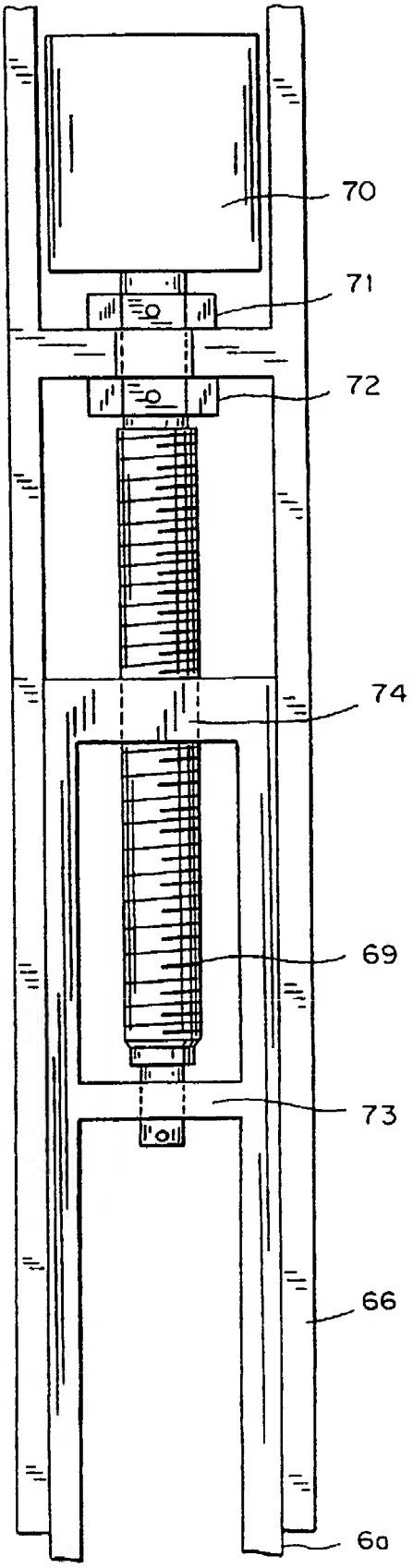


FIG. 13

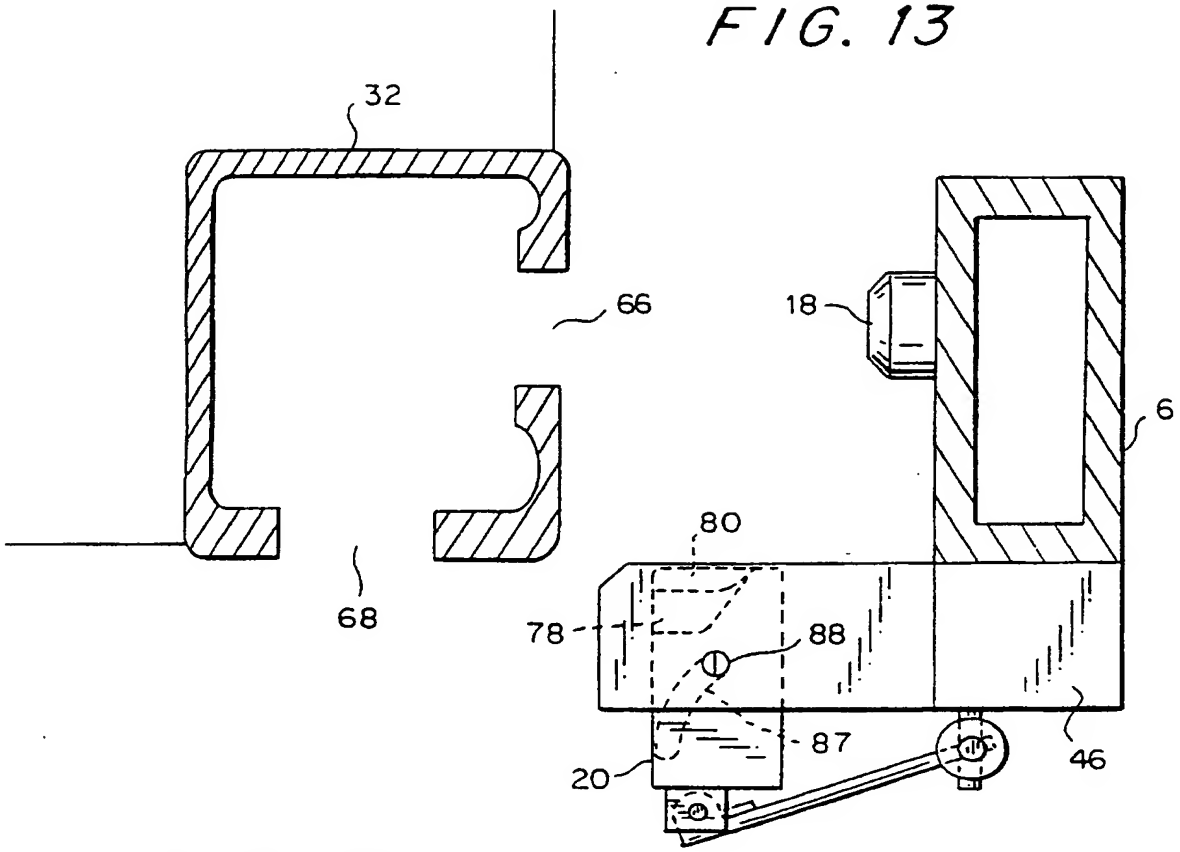


FIG. 14

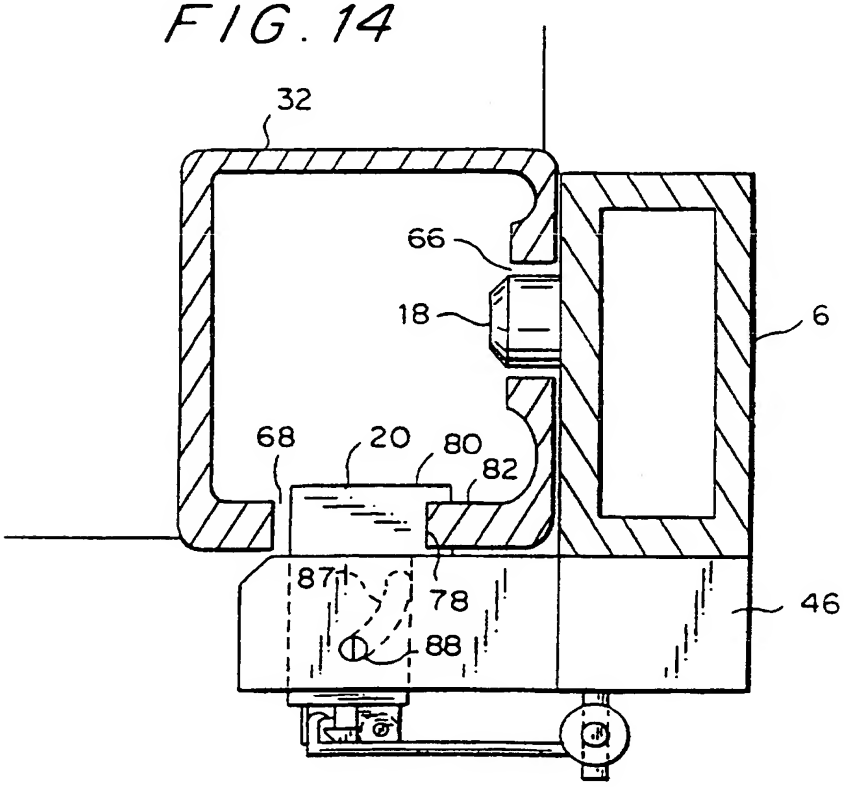


FIG. 15

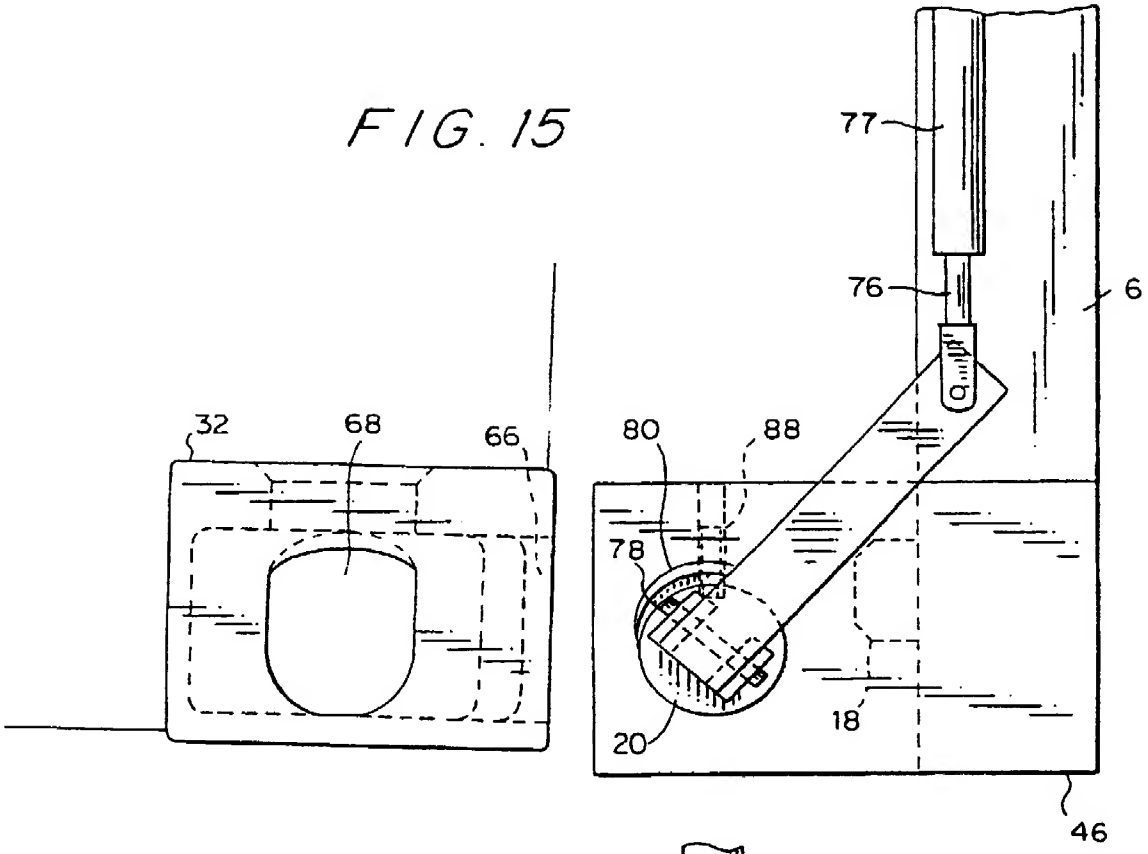
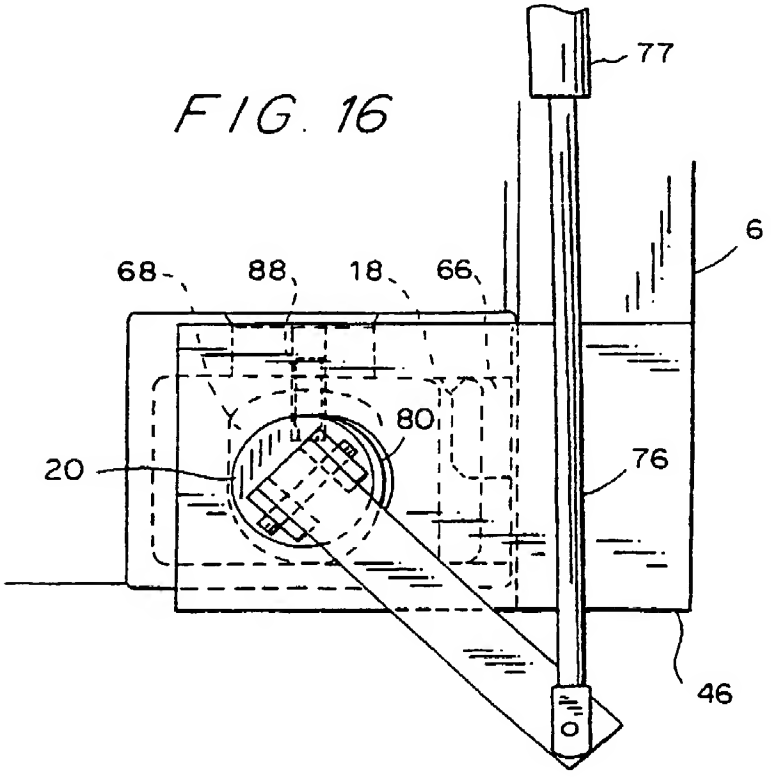


FIG. 16



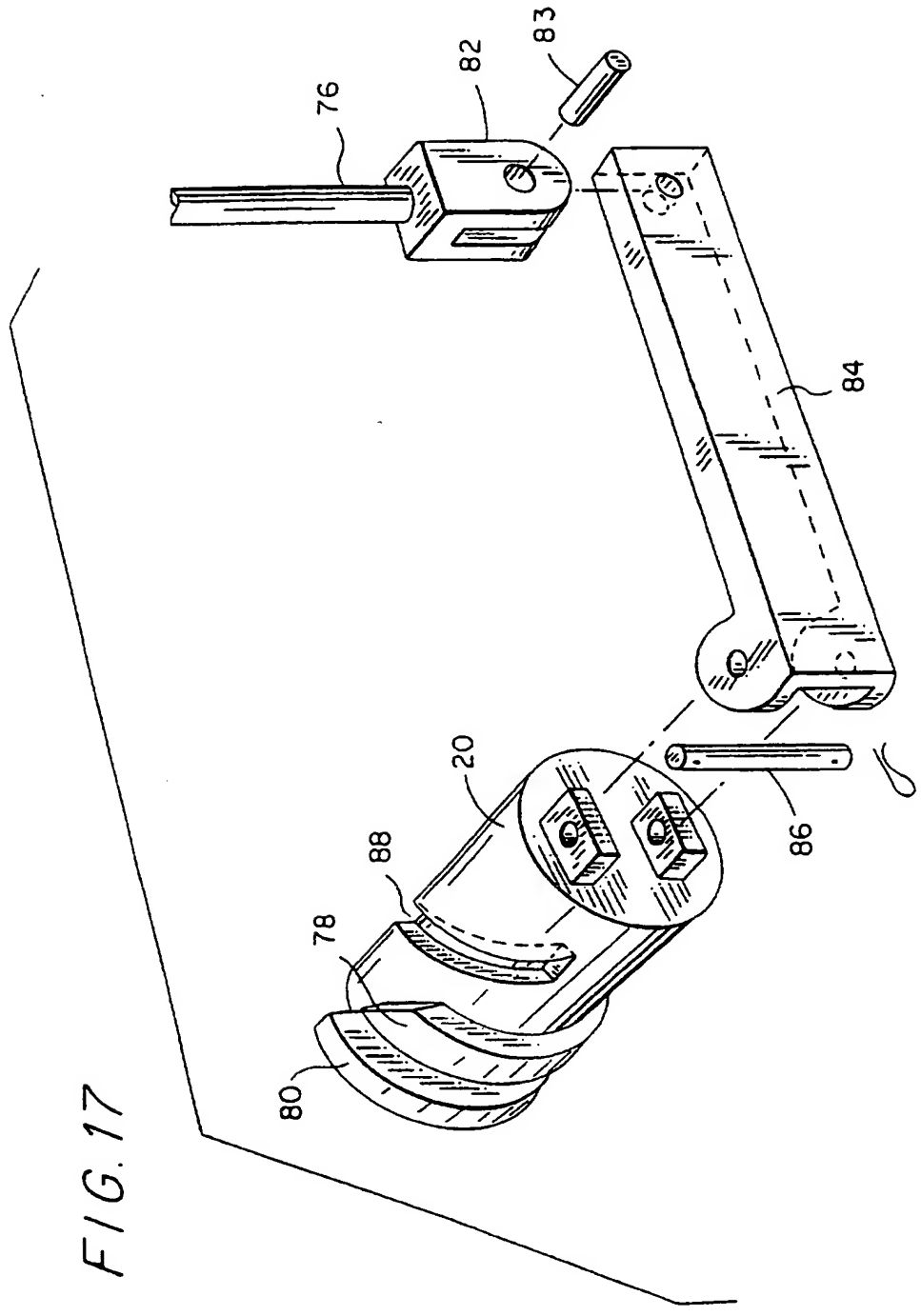


FIG. 17

INTERNATIONAL SEARCH REPORT

Intern. nal Application No
PCT/US 97/14337

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 B66C1/66

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 6 B66C B63B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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Y	US 2 963 310 A (ABOLINS) 6 December 1960 see the whole document	1,2,8
A	DE 33 36 458 A (MI-JACK PRODUCTS) 25 April 1985	
A	US 5 415 517 A (LANIGAN) 16 May 1995	
A	EP 0 263 087 A (KARLSSON) 6 April 1988	
A	GB 1 379 969 A (BRITISH RAILWAYS BOARD) 8 January 1975	

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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"O" document referring to an oral disclosure, use, exhibition or other means

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"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

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Date of the actual completion of the international search	Date of mailing of the international search report
31 October 1997	20. 11. 97

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Van den Berghe, E

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INTERNATIONAL SEARCH REPORT

Information on patent family members

Interm. ..al Application No
PCT/US 97/14337

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